A CASE OF PRIMARY CARCINOMA OF BRONCHUS IN THE MEDIASTINUM.*

By H. R. OLIVER, M. D., San Francisco.

Mr. P. D., age 42. Mass. Albino. Previous health good. Family history good. No veneral history. In February, 1908, patient complained of pain in the right apex. He was somewhat weak. One week later developed a temperature of 101.6. A physician made diagnosis of pneumonia. Patient was confined to the house for two weeks; temperature was never over 102; right apex dull to percussion. Patient did not regain strength and diagnosis of tuberculosis of lungs was made. Sputum examined by myself several times, during a period of three months, failed to reveal tubercle bacilli. The sputum was of a serous nature and had a slight streak of bright blood.

Patient then went to the southern part of the state for two months, failed to gain strength and came home. While south a physician claimed to have found tubercle bacilli once. On his return I again examined sputum several times with same findings as previously stated. Rather suddenly patient became markedly dyspnoeic and could only rest in upright position. A diagnosis of cardiac failure was made. I then saw the patient for the first time and found markedly dyspnoeic and cyanotic. On examination the heart sounds and pulse were normal, the right side was bulging and the pleura contained fluid to the fourth rib. Aspiration showed a clear straw colored fluid. high in specific gravity, rich in albumin but containing few pus cells; the polymorphonuclears in excess, and no blood present. Two liters were withdrawn; patient much relieved but complained of pain between scapulae at lower angles. Percussion of chest showed right side flat, left emphysematous. After withdrawal of the fluid some breath sounds feebly heard at base of lung (probably transmitted from emphysematous left lung). He got stronger but developed an extensive edema of the right side of the face, neck and forearm. A diagnosis of mediastinal tumor was then made. This edema then extended to the left side of face and arm. The veins of both sides of chest were distended to size of lead pencils, and anastomosis with epigastrics caused these to also become swollen. There was little or no swelling of the lower limbs, no albumin or casts in the urine. This condition continued for several days, patient suffering great pain, especially in upper dorsal region. He became rapidly worse and pleura in both sides filled up with fluid, and then a remarkable change took place; the edema of the face and arms on both sides subsided to normal. Edema of lungs of inflammatory nature caused death three days later. The temperature was never over 100 during the whole period.

A post mortem was held. Heart was found to be normal in size and texture, valves normal. Both pleura filled with straw and bloody colored fluid. A large mediastinal tumor was found incorporating all the structures of the mediastinum and right lung, extending into the right apex and down the pleura to and along the diaphragm. The tumor which was sectioned was found to be a carcinoma, arising from the mucous membrane of bronchus at the bifurcation. There it was the size of a half dollar, edges elevated and center ulcerated. This extended down the bronchi on the right side and to the second bifurcation completely obliterated them. Then small masses were scattered throughout the contracted and pus-filled lung. The left side showed none, the peri-bronchial lymph glands showed metastases. The superior vena cava was surrounded and pressed on while the inferior was not interfered with. The liver was cyanotic and atrophic, the kidneys and spleen were normal but showed marked passive congestion.

Conclusions: The fact that the sputum was of a serous nature and blood streaked was most likely due to transudation and the blood due to the ulceration of the primary tumor. The pain in the back was the typical mediastinal pressure pain. But the interesting phenomena of the great edema occurring after aspiration and then disappearing, on refilling, can be explained by the fact that while the fluid floated or held up the heavy, infiltrated mass of lung and the lumen of superior vena cava remained open, and when withdrawn this mass fell downward, causing a bend in the vessels and occlusion, the edema resulting. Just before death, when the fluid returned, the lung was again floated or pressed upward and the vessels regained their continuity and circulation was reestablished and the edema disappeared. The histologic examination showed the carcinoma to have arisen from the bronchial epithelium.

* Reported at Cooper College Science Club.

TWO CASE REPORTS BY M. L. EMERSON, M. D., MADE TO THE ALAMEDA COUNTY MEDICAL ASSOCIATION.

At the last meeting I presented a patient on whom I had operated for a pseudo-pancreatic cyst or a cyst of the omental bursa, removing from this lesser peritoneal cavity two quarts of dark, blood-stained fluid from a very much emaciated patient, who at some time probably suffered from a trauma of the pancreas.

Colicy pain referred to the left hypochondrium and left shoulder, nausea, vomiting, steady enlargement of the abdomen and emaciation, were his chief symptoms. This tumor reached the abdominal wall between the stomach and colon in the left hypochondrium.

This evening I present to you a specimen of an acute hemorrhagic pancreas secured post mortem to-day, from a patient on whom I operated four days previously. I have purposely kept it on ice since its removal this afternoon, that you might observe the pathognomonic fat necrosis which has occurred in the fat of the omentum, falciform ligament, mesentery and throughout the substance of the pancreas itself.

The abdomen in this case contained considerable blood-stained fluid, the pancreatic area looked like a carcinomatous mass within the intestines, the fat necrosis was everywhere demonstrable—breaking through the gastrocolic omentum the nature of the lesion could be plainly recognized.

No stones or any cause of obstruction could be demonstrated in the pancreatic ducts. The hemorrhage, you will notice, is in the head of the gland, which part is somewhat enlarged.

RAILWAY SURGEONS

CRUSADE AGAINST THE ANOPHELE MOSQUITO.*

By T. B. REARDAN, M. D., Oroville.

When Laveran, in 1882, discovered the parasites in the blood of those ill with malarial fevers, an opening wedge was driven, which has finally made clear the way for the control, and one might say, the elimination of such fevers in any given locality. Patrick Manson found the mosquito to be the host of the parasite, and Sir Ronald Ross that it inoculated the human through its bite.

The first scientific demonstration of protection was carried out in the swamps of Rome, where in mosquito-proof houses in a place where hardly any one was ever known to escape infection, the protected laborers were able to work and remain free of malarial fevers. Patrick Manson, to prove the findings, had an infected Anophele mosquito carried

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from these same swamps to the heart of London, which he allowed to bite his son, who became inoculated and developed the typical form of Tertian malarial fever.

How different is this positive knowledge from the theories of twenty-five, twenty and fifteen years ago, when malarial fever was supposed to be due to the inhaling of a miasma arising from the ground in the cool of the evening or the early morning hours. In an old standard authority of my student days I found these words on malaria:

"No chemst has yet been able to demonstrate the existence of malaria. We assume its existence from certain observed effects on the organism, just as we do in the case of other poisons which produce certain specific diseases. Malaria is believed to be the produce of organic decomposition in soils, whatever may happen to be their mineral composition; water is indispensable to the process, and a high temperature although not absolutely necessary, greatly aids it. It is generated in greatest abundance in marshes which contain a high percentage of organic matter, hence the name by which it is familiarly known, Marsh Miasm."

The older authorities while not knowing the role played by the mosquito yet gave practically the same advice given to-day for protection, and noted the disappearance of malarial fever from localities after swamps had been drained and sub-soil drainage instituted.

In 1898 Patrick Manson, summing up the status of preventive measures prior to the proving of the mosquito theory, wrote as follows, as extracted from an article written by Dr. W. F. Snow: "Malaria, the Minotaur of California. Experience has shown that much can be done to free a locality of malaria. Drainage and cultivation is desirable when the land will repay the expenditure, permanent and complete flooding when it will not. The inhabitants of malarious districts ought to live in villages and towns, with well paved streets and courts, going out to cultivate their fields during the day, but returning to sleep in the town before nightfall. Houses should be placed on high and dry situations. It is unwise to have flower beds, or vegetable gardens near bedroom windows, or to allow water from bathrooms and cookhouses to flow over the ground in the vicinity of the house, or to keep water unchanged in tubs, or water butts, for mosquitoes to breed in. Pools and puddles of stagnant water should be filled up and turfed. The neighborhood of swamps is to be avoided. There are many simple precautions of this sort which will occur to every prudent man and which in malarious countries he should take care to have carried out."

Almost all are now familiar with the brilliant results obtained by Col. Gorgas in the Panama canal zone, owing to his scientific sanitary precautions and the protective care accorded the employees, which has been the prime factor in the successful carrying forward of the great canal. DeLesseps and his engineers were able men, but unfortunately for them the prophylaxis of malarial and yellow fever, was not known at that time, the result being that they could not bring in a sufficient number of well laborers to take the place of those taken ill, while now the death roll hardly equals that of many of our large cities.

The public, always suspicious of any great advancement, even when for its own best interest, as witness the still persistent attack against vaccination, have, thanks to quite a number of well-written magazine articles in the past few years, at last awakened to the knowledge that their lives can be made more comfortable and vast sums of money saved and earned as represented by the fewer number of hours lost from malarial fevers, if proper means be taken to destroy the anophele mosquito.

In the early summer, Oroville, through the ladies of the Monday Club, acting under the stimulus of its energetic president, Mrs. Harry Klugel, invited Prof. W. B. Herms, of the State University, to deliver a lecture on mosquitoes.

On an evening in May Prof. Herms, to an audience that filled the courtroom, explained the life history of the mosquito, confining his remarks principally to the culex and the anophele, explaining by charts their characteristics, and how they could be distinguished one from the other in both their embryonic and adult stages, and that so far as is known positively, the anopheles alone is the malarial bearing pest; how with proper protection against its bite and the destruction of its breeding places malarial fever could be entirely suppressed in the city. That evening after the lecture a collection was taken up which formed the nucleus of the sum necessary to carry out Prof. Herms' suggestions. A few weeks later a tag-day was selected on which the ladies collected $480. The different gold dredging companies, controlling twenty-two boats, pledged $25 for each boat. Each dredge master was made a supervisor for the district adjoining his boat, and every ten days has attended to the speading of oil on all pools of water in his vicinity. Prof. Herms himself went over the whole field, marking with a red flag all mosquito-breeding places; his assistant then either had them drained when possible or oil poured over the surface. This work has been regularly carried on for over three months. Mr. B. Bairos, Prof. Herms' assistant, delivered several lectures to the school children, explaining the necessity of keeping their respective premises free of all water-holding articles. He showed them the mosquito wigglers, and pointed out to them the distinguishing characteristics between the two varieties of mosquitoes, so that hundreds of the children have become destroyers of mosquito-breeding places.

While it is an open question whether there is any less malaria here than in former years, there is no question but that there are very many less mosquitoes, and the residents have been freer from annoyance from the pests than for many years past.

Oroville has made a good, earnest crusade against the malarial-bearing pest this year and as it is the firm determination of its citizens to continue the fight from year to year, she will in a few years rid herself of her unfortunate reputation of being the hotbed of malarial fevers, though no more entitled to such title than many another city in the Sacramento and San Joaquin valleys.